Apple Trees that Fail to Bear.

Replying to an inquiry of a Progressive Farmer reader regarding apple trees which, while growing rapidly and apparently healthy, fail to produce fruit, Horticulturist W. F. Massey, of the North Carolina Experiment Station, says:

Apple trees that are growing rapidly seldom fruit early; the most rapid and vigorous growers are always the longest in getting into bearing. Apples like the Northern Spy, which are beautiful and rapid growers, will take about sixteen years to get to fruiting, while a slow growing and stunted looking pippin will fruit in a few years. You do not say where the orchard is. If on good strong clay soil I would seed the orchard down to grass at once, and keep the grass mown several times during the year and leave all the cut grass on the land as a mulch. Then give the orchard an annual dressing of acid phosphate and potash mixed with four hundred pounds of acid phosphate to fifty pounds of the muriate of potash. In short, use the land for fruit only and do not attempt to make a pasture or a hay field ot it, and you will get fruit.

A Bright Outlook for North Carolina Agriculture.

Editors Progressive Farmer:

I send $1 to renew my subscription to The Progressive Farmer. I wish to say that I am more than pleased with the great improvement in the paper. It ought to be in the hands of every farmer, especially in North Carolina. We need just such a paper as you are making it. There is no reason why, as heretofore, farmers should be compelled to send out of the State for their agricultural papers. Let The Progressive Farmer be the medium of exchange of opinions for the farmers; and situated at the capital of the State, being in close touch with the workings of the Department of Agriculture and of the A. & M. College, there is no reason why it should not be a power for great good to the people of the State. With a good home agricultural paper, together with the work of the Department of Agriculture for the farmers, and the education of boys to become farmers at the A & M. College, there seems to be a brighter day for North Carolina agriculture. I wish you success, and anything that I can do to encourage and help you in the good cause, let me know.

Very sincerely, R. W. SCOTT.

Melville Stock Farm, Melville, N. C., March 8, 1904.

Notes About Corn, Peas, and Plowing.

Editors Progressive Farmer:

I promised to give my experience on plowing, and if you will permit me a small place in your much esteemed paper, I will tell my brother farmers how it is with me.

First, if you don't get your plowing done in the spring as soon as you would like to have it done, do not be discouraged and don't plow too slightly in order to get over the land, nor plow when land is too wet. Either one is a loss of time and labor, also injurious to land. Last year was a late, wet spring here in old Burke County, and I was running a saw-mill, hence we could not plow soon. I did not plow any until after the 6th of April. But with four mules on hand and a small crop to put out (only about fifteen acres), I plowed and harrowed with disk harrow and put it in good shape before planting and gathered the best crop per acre that I have ever done.

* * *

You should select your seed corn in the fall and have plenty on hand, but do not shell it until you need it. When ready to plant, put corn in a wash tub or some such vessel, wet it thoroughly, rubbing it well, then put some unslacked ashes on corn and rub well again. Put on ashes enough to make the bran a deep yellow. Then let dry off so as to work well in corn drill.

Corn thus treated will come up sooner and better. Then again the birds and worms will not injure your stand as badly, for they will not like the taste of ashes.

* * *

Some hold the idea that peas will injure corn, but I do not think so, though if they should lessen the crop a few bushels, they will more than make it up in the land for next crop. But you must not let them be too thick. I plant between every other hill of corn (not in hill with corn), then thin to about four pea stalks to hill; then they will make longer vines and more peas, and if gathered, will more than make up for loss of corn.

* * *

Some years ago I began on one special piece of land (two and one-half acres creek bottom). Planted corn the first year, also peas as before stated; made thirty bushels of corn on the lot, then followed with bearded wheat. Continued this way for about seven years, and the last year of the seven the lot made one hundred and thirty bushels, plowing very deep all the time.

R. C. WHITENER.

Burke Co., N. C.

TALKS ON INSECT PESTS.

IV.—The Terrapin Bug.

Editors Progressive Farmer:

This insect is a very serious pest of cabbage, collards and other nearly related plants; indeed, in some parts of North Carolina, gardeners have almost despaired of growing these vegetables. It is known by a variety of names such as: "Harlequin bug," from the gay arrangement of its colors; "lincolnite," from the fact that it made its appearance about the time of President Lincoln's administration; "calico-back," from the contrasting colors; "fire bug," from the fact that its attack causes the plant to wilt and die as if burned by fire. In some localities in the State it is even known as the "Sherman bug," because of its appearance about the time that Sherman's army was operating most actively in the South.

By reason of its appearance at the times just mentioned, many have assumed that it is a native of the Northern States, and was introduced into the South by the shipment of supplies to the Northern soldiers then in our midst. This is an entirely erroneous idea, for the insect is in reality a native of the far South, probably Mexico or or Central America, and its first serious injuries in the United States were noted in Texas. It spread northward and reached North Carolina in the sixties. It is well for us to know this, for it makes our knowledge of the insect more clear, and its life history is modified to conform to our climate, which is more severe than that of its native country.

Being a native of the far South, the insect cannot easily pass through severe winters, and in this State only the hardy, full-grown bugs survive this season, so far as we know. This is very fortunate for us. Likewise, the shorter season of warmth in the mountainous parts of the State prevents it becoming so serious a pest there as it is in the warmer sections.

The adult bugs pass the winter under rubbish, logs, boards or stones lying on the ground, especially near fields or gardens where their food-plants were grown the previous summer. From these hiding places they emerge early in April and congregate upon seeding kale, turnips, etc., upon which they subsist until cabbage, collards or other suitable food is to be had in abundance, when they go to it and continue their destruction. The females deposit the eggs in a cluster, usually a dozen in each lot, on the under side of the leaves. The eggs are pearl-gray, with black markings, barrel-shaped, and stand on end in the cluster in two compact rows. A little searching in summer will enable you to recognize them if you do not know them already. The eggs hatch into small greenish-colored bugs with black markings, which somewhat resemble the adults in general appearance, but are of course much smaller, the markings are not so conspicuous, and there are no wings. The young bug sheds its skin from time to time, each new skin being larger than the old one which preceded it. There are four or five of these moults of the skin until the adult stage is reached when the insect has fully developed wings and can fly freely from place to place. It should be noted that this method of growth is similar to that of the grasshoppers, in that the young is always somewhat like the adult in general appearance except in size and in not having wings. It is a very different mode of development from that found among butterflies, moths, beetles, flies, and bees, in which the young is a caterpillar, grub or maggot.

REMEDIES.

On account of the fact that the bug sucks the sap from within the plant it cannot be reached by the application of paris green to the outside of the plants. Nor has any material been found which will destroy the bugs which is not at the same time injurious to the plants. It is evident, therefore, that it is of the highest importance to keep them from getting a start in the cabbage field. The methods which may be used with best success are:

(1) Destruction of all rubbish which would furnish winter quarters for the bugs. (2) Destruction of the first individuals which appear in spring. (3) Using an early growing crop like mustard as a trap crop, which is then destroyed together with the bugs. (4) Hand-picking of the bugs and eggs. (5) Late planting.

Now this may sound like a great deal of work to do; so it is, but not nearly so much as it would seem if you go at it right. And, if thorough work be done very early in the season, there will be all the less to do later. (1) Under the first head, no discussion is needed. (2) When the bugs first appear in the spring they will congregate in considerable numbers on certain individual plants, especially seeding turnips. They may then be gathered bodily and crushed or burned, or they may be brushed from the plants into pans of tar or kerosene. If they are not noticed until they appear on the cabbage or collards, gather them thoroughly without delay for every female then killed is equivalent to a score later. Do not wait until they become noticeable on the plants but search for them every two or three days before they make themselves noticeable. Do this work as early as possible in the day for they will then be more sluggish from the cold of night, and can be more easily gathered.

A few hills of early-sown mustards will make a quick growth which is early attacked by the bugs, and they may be destroyed by gathering plants, bugs and all, and burning, which will clear the way for the cabbage which is then set.

As to late planting, I am informed by a gardener of especially close observation that cabbage or collards set out after August 1, at Raleigh, are not troubled to any serious extent by this bug.

The reader will see, therefore, that it is by fighting the very first bugs that appear, and destroying them before they provide for another generation, that the best results are to be secured. If this is neglected, the work simply becomes that much greater a little later, and it may then be impossible to save the plants. In order to escape injury and not be obliged to fight the bugs, late planting is necessary.

ANOTHER WORD ABOUT SPRAYING.

How about spraying? Have you gotten your pump? Did you make the first application to apples and pears before the buds burst? If not, it is too late now to spray until after the blossoms fall, so be prompt about it then—after the blossoms fall, not before, remember. So far the prospect is that those who spray will have a good crop this year, but we suspect that those who do not will have the usual failure. All the firms who have advertisements in The Progressive Farmer are reliable. Write for their catalogues and get a pump. Be sure that your bordeaux mixture is properly prepared according to the directions in Entomological Circular No. 6, copy of which will be sent on request. Remember that the formula there given is for use on apples and pears. If you want to spray peaches and plums, make the bordeaux with only three pounds of blue stone instead of five, and use six pounds of lime instead of five, as there recommended.

FRANKLIN SHERMAN, JR.,
Entomologist of Department of Agriculture, Raleigh, N. C.